

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-25 are pending in the present application. Claims 1-5, 7, 13-17, 19 and 25 are amended by the present amendment.

In the outstanding Office Action, Claims 2 and 3 were rejected under 35 U.S.C. § 112, second paragraph; Claims 1-4, 7, 12-16, 19, 24 and 25 were rejected under 35 U.S.C. § 103(a) as unpatentable over Sata, "Improvement of Translation Quality of English Newspaper Headlines by Automatic Preediting" (herein "Sata") in view of U.S. Patent No. 6,446,036 to Bourbonnais et al. (herein "Bourbonnais"); and Claims 5, 6, 8-11, 17, 18 and 20-23 were indicated as allowable if rewritten in independent form.

Applicant thanks the Examiner for the indication of allowable subject matter.

In response to the rejections of Claims 2 and 3 under 35 U.S.C. § 112, second paragraph, Claims 2 and 3 have been amended to clarify the claimed subject matter, consistent with the specification as originally filed at page 8, line 11, to page 10, line 15. Accordingly, no new matter has been added, and Applicant respectfully requests those rejections be withdrawn.

Applicant respectfully traverses the rejection of Claims 1-4, 7, 12-16, 19, 24 and 25 under 35 U.S.C. § 103(a) as unpatentable over Sata in view of Bourbonnais.

Amended independent Claim 1 is directed to a translation apparatus for translating article information in a first language including an article body and a related headline into a second language, including, *inter alia*,

a phrase alignment processing unit configured to respectively extract a noun phrase from the headline and a noun phrase candidate from a head sentence of the article body, to count coincident words between the noun phrase and the noun phrase candidate, and to output the noun phrase and the noun phrase candidate as a phrase

alignment result if a coincidence ratio based on the counted value is above a threshold;

Amended independent Claims 13 and 25 include similar features.

In a non-limiting example, Applicant's Figure 7 indicates that the headline and the article body are morphologically analyzed. In this example, a noun phrase is extracted from the headline based on the analysis result (S61), and noun phrase candidates are extracted from the article body based on the analysis result (S62). A number of coincident words between the noun phrase of the headline and each noun phrase candidate of the article body is counted (S63). Further, a coincidence ratio, which is a number of coincident words divided by a number of words of the noun phrase candidate, is calculated for each noun phrase candidate (S64). In addition, in this example one noun phrase candidate of which the coincident ratio above a threshold is the highest is selected from the noun phrase candidates (S66), and a pair of the noun phrase (i.e., of the headline) and the one noun phrase candidate (i.e., of the article body) is output as the phrase alignment result.

In this way, a noun phrase candidate corresponding to a noun phrase of the headline is extracted from the article body. As a result, by replacing the noun phrase with the noun phrase candidate, the noun phrase of the headline is correctly translated.

Applicant respectfully submits that the combined disclosure of Sata and Bourbonnais does not teach or suggest a noun phrase candidate corresponding to a noun phrase of the headline being extracted from the article body. Thus, the combined disclosure of Sata and Bourbonnais does not describe an ability to correctly translate the noun phrase of a headline. Sata merely describes rules for inserting verb "be" in a headline.¹ In particular, Sata indicates that omissions of "be" were found in 73 out of 284 headlines, and defines that an expression which unites with "be" to function as a finite predicate is called a key. Further, Sata indicates that in the headline where the verb "be" is not expressed, there exists a noun

¹ Sata at page 497.

phrase (NP) in front of the key in question, and an adverb may exist between the NP and the key, as in the headline. Further, Sata indicates that changing the omission of “be” to a visible form restores a finite predicate and makes it possible for a syntactic parser to recognize as a clause a part which was not recognized so by then. Sata indicates this part is a latent clause. Further, Sata indicates that a decision on the insertion of “be” can be made on whether there is a clause which syntactically conflicts with the latent clause. In other words, Sata indicates that in the headline where the verb “be” is omitted, the verb “be” is inserted between the NP and the key in order to recognize it as a clause. However, Sata does not teach or suggest that a noun phrase candidate corresponding to a noun phrase of the headline is extracted from the article body, and therefore the noun phrase of the headline can not be correctly translated. Further, Applicant respectfully submits that Bourbonnais also does not teach or suggest that feature. Thus, Applicant respectfully submits that the combined disclosures of Bourbonnais and Sata do not teach or suggest a translation apparatus for translating article information that includes extracting “a noun phrase from the headline and a noun phrase candidate from a head sentence of the article body, to count coincident words between the noun phrase and the noun phrase candidate, and to output the noun phrase and the noun phrase candidate as a phrase alignment result if a coincident ratio based on the counted value is above a threshold,” as recited in amended Claim 1 and as similarly recited in amended Claims 13 and 25.

Accordingly, it is respectfully submitted that independent Claims 1, 13 and 25, and claims depending therefrom, are allowable.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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